

ABSTRACT

Provided is a balanced-type surface acoustic wave filter in which an impedance ratio between an unbalanced signal terminal a balanced signal terminal can be set to 1:2 and also a satisfactory filter characteristic is attained.

In a balanced-type surface acoustic wave filter 1, IDTs 4b and 5b in each center of first and second longitudinal coupled resonator type surface acoustic wave filter sections 4 and 5 are connected to an unbalanced input terminal 3, first and third IDT sections 4a and 4c, and 5a and 5c on both the sides are connected to first and second balanced output terminals 7 and 9, respectively, the IDTs 4a to 5c have narrow pitch electrode finger sections N, and when an electrode finger pitch of the narrow pitch electrode finger section of the second IDT is set as P1, an electrode finger pitch of the narrow pitch electrode finger section of the first and third IDTs is set as P2, the number of electrode fingers except for the narrow pitch electrode finger section of the IDT is set as K1, and the number of electrode fingers except for the narrow pitch electrode finger section is set as K2, $P1 > P2$ and $1.12 \leq K1/K2 \leq 1.65$ are satisfied.